

CLAIMS

1. A valve assembly for a respirator comprising a valve body having a valve outlet portion and a valve inlet portion which together define a valve cavity for a valve mechanism permitting gas flow from the valve inlet portion to the valve portion member, an air purge means comprising a purge inlet, connectable to an air pressure supply means, an air purge outlet and an air deflection means in which the deflection means is spatially arranged relative to the valve mechanism and purge outlet so that, in use, air exiting the purge outlet and incident the air deflection means provides a curtain of air over the valve mechanism.

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2. A valve assembly according to Claim 1, in which the valve body is cylindrical in shape.

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3. A valve assembly according to Claim 1 or Claim 2, in which the valve inlet portion provides a seat for the valve mechanism.

4. A valve assembly according to Claim 3, in which the purge inlet and outlet is associated with the valve inlet portion.

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5. A valve assembly according to Claim 4, in which the deflection means is associated with the valve outlet portion.

6. A valve assembly according to Claim 4 or Claim 5, in which the purge outlet comprise one or more bores or channels in an upper surface of the valve inlet portion.

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7. A valve assembly according to Claim 6, in which the width of the bore or channel tapers inwardly towards to the valve outlet portion.

8. A valve assembly according to any of Claims 4 to 6, in which the deflection
5 means comprise a cylindrical boss or embossment on an inner surface of the valve outlet portion.

9. A valve assembly according to any preceding Claim, in which the outlet
portion is associated with a dead-space protection member comprising air guide
10 means.

10. A valve assembly according to Claim 8, in which the air guide means
comprise a plurality of vanes defining air conduits communicating with the purge
outlet.

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11. A valve assembly according to Claim 9, in which the vanes inwardly turn to
toward the centre of the protection member.

12. A valve assembly according to Claim 10, in which the vanes extend toward
20 the valve inlet portion to a greater extent at or adjacent the centre of the protection
member than at its edge.

13. A valve assembly according to Claim 9 or Claim 10, in which the vane walls
comprise inward radial protections at or adjacent the centre of the protection member.

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14. A valve assembly according to any preceding Claim, in which the valve mechanism comprises a membrane.

15. A valve assembly substantially as hereinbefore described with reference to,
5 and as shown in, Figures 4 and 5 of the accompanying drawings.